

ORIGINAL

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)

Petition for Rulemaking filed by Helping)
Equalize Access Rights in Telecommunica-)
tions Now ("HEAR IT NOW") Regarding)
Section 68.4(a) of the Commission's Rules,)
Hearing Aid-Compatible Telephones)

RM-8658

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To: The Commission

REPLY COMMENTS OF BELL SOUTH

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REPLY COMMENTS OF BELL SOUTH

BellSouth Corporation, BellSouth Telecommunications, Inc., BellSouth Personal Communications, Inc., and BellSouth Cellular Corp. (collectively, "BellSouth") hereby reply to the comments filed July 17, 1995 in response to the Petition for Rulemaking by Helping Equalize Access Rights in Telecommunications Now ("HEAR IT NOW").

SUMMARY

The comments make clear that there is no reason at this time for the FCC to initiate proceedings to revoke or modify the hearing-aid-compatibility exemption for mobile and portable phones used in connection with commercial mobile services. None of the advocates of eliminating the exemption has made out a case that the statutory criteria for eliminating or modifying the exemption can be met. Moreover, given the ongoing studies of the interactions of hearing aids with digital mobile phones, it would be inappropriate for the FCC to undertake proceedings at this time.

Once completed, these studies will provide the Commission with a basis for determining what, if any, regulatory action is needed.

The FCC should base any decision on whether to begin inquiry or rulemaking proceedings on elimination or modification of the hearing-aid-compatibility exception for mobile and portable phones on scientific evidence, and not on hyperbole and misused data. The HEAR IT NOW petition is based on exaggerations and misinterpretations of studies from around the world concerning the interactions of GSM phones with hearing-aid use. QUALCOMM, a vendor of competing CDMA technology, has jumped on the HEAR IT NOW bandwagon, trying to take advantage of the regulatory process to advance its business prospects. The fact is that GSM phones are in use throughout the world and the parade of horrors HEAR IT NOW recites as the sure consequences of GSM usage simply have not come to pass. BellSouth urges the Commission to base its decision on the facts, not HEAR IT NOW's media campaign.

I. UNDER THE STATUTORY CRITERIA, THERE IS NO BASIS FOR ELIMINATING THE EXEMPTION FOR MOBILE AND PORTABLE PHONES AT THIS TIME

The Commission has no basis to eliminate or modify the statutory exemption from hearing-aid compatibility for mobile and portable phones. To change the rules as HEAR IT NOW advocates, the Commission would have to make the following four findings:

- that revocation or limitation of the exemption "is in the public interest";
- that continuing the exemption "would have an adverse effect on hearing-impaired individuals;"
- that making the exempt phones hearing-aid compatible "is technologically feasible;" and

- that compliance with the hearing-aid compatibility standard “would not increase costs to such an extent that the telephones . . . could not be successfully marketed.”¹

BellSouth showed in its Comments that these criteria cannot be satisfied now. None of the advocates of a rulemaking have shown that the Commission is in a position to make these findings. The Commission has better uses for its limited resources than such a pointless exercise.

In its Comments, the Hearing Industries Association (“HIA”) claims, in effect, that the second criterion can be met.² It argues that “[b]y requiring new PCS technology to comply with current regulations regarding hearing aid compatibility, the Commission will ensure that a substantial portion of the US population will be able to enjoy advances in communications technology.”³ HIA fails, however, to consider that there are no “current regulations regarding hearing aid compatibility” for mobile and portable phones. As TIA notes, mobile and portable phones are not subject to the inductive coupling requirements applicable to wireline phones (47 C.F.R. § 68.316).⁴ As BellSouth noted previously, these requirements may not be appropriate for

¹ 47 U.S.C. § 610(b)(2)(C)(i)-(iv); *see* 47 C.F.R. § 68.4(a)(4).

² HIA does not claim that requiring all mobile and portable phones to be fully hearing-aid compatible is either technologically feasible or economically practical. Nor does it address the public interest ramifications of delaying the deployment of PCS, which would be contrary to the public interest determinations made by the Commission and the Congress.

³ HIA Comments at 3.

⁴ Mobile and Personal Communications 1800 Section of the Telecommunications Industry Association (“TIA”) Comments at 2.

pocket-sized, low power devices,⁵ and developing a compatibility standard would be a complex task best undertaken after the studies already underway have yielded results.⁶

Even requiring all mobile and portable phones to become electromagnetically compatible with hearing aids (*i.e.*, non-interfering) would have a major adverse impact on hearing aid users in the short term. As BellSouth pointed out in its Comments, this would result in significant delays in PCS deployment, increasing demand for analog cellular service; prompt deployment of GSM-based PCS, however, would to some extent relieve analog cellular systems' capacity constraints, making electromagnetically compatible service more available for hearing-aid wearers.⁷

BellSouth agrees with Southwestern Bell Mobile Systems ("SBMS") that "given the lack of information and specificity concerning whether there even is a hearing aid compatibility problem in the United States, the issue certainly is not ripe enough to assess whether the exemptions for public mobile and private radio services under the Hearing Aid Compatibility Act of 1988 should be revoked."⁸

⁵ See BellSouth Comments at 9. Ericsson indicated in its Comments that it currently manufactures wireless phones that meet the wireline hearing-aid-compatibility standard and, accordingly, had no objection to a requirement that PCS phones be compatible with use of an inductive coil pickup. Ericsson Comments at 2-3. Nevertheless, Ericsson urged the Commission not to require such compatibility immediately, however, and opposed any requirement to retrofit existing phones. *Id.* at 3 n.5.

⁶ TIA Comments at 2.

⁷ See *id.* at 8.

⁸ SBMS Comments at 5.

II. FCC ACTION ON HEARING AID COMPATIBILITY FOR MOBILE AND PORTABLE PHONES SHOULD AWAIT TEST RESULTS

HIA notes in its Comments that progress is being made in the development of PCS systems that “cause little or no interference to hearing aids” and that “studies are underway in the United States” concerning the electromagnetic compatibility of hearing aids with a variety of mobile and portable phone technologies.⁹ HIA concludes that the Commission should “critically review” the results of these studies.¹⁰

BellSouth agrees with HIA’s conclusion that urges the Commission to wait for the results of the ongoing studies. In particular, the Center for Study of Wireless Electromagnetic Compatibility at the University of Oklahoma has a study in progress, with the cooperation of the cellular and hearing-aid industries, that is scheduled to be completed within six months. Moreover, the Personal Communications Industry Association (“PCIA”) has formed a compatibility task force that is investigating a broad range of interference issues.¹¹ It would be unwarranted for the Commission to proceed with a rulemaking or inquiry at this time, because there is not yet any evidence regarding the nature and scope of the potential interference posed by the technical characteristics of digital mobile and portable phones designed to the various United States standards. All of the studies to date have been in foreign nations, where the digital standards, power levels, and frequencies for PCS differ substantially from those to be employed here.

⁹ HIA Comments at 4.

¹⁰ *Id.*

¹¹ PCIA Comments at 3.

BellSouth disagrees with the suggestion of the United States Telephone Association (“USTA”) that the Commission proceed with a Notice of Inquiry (“NOI”) at this point.¹² While the Commission might well find that an NOI is an appropriate way to proceed once the ongoing studies have produced results, an NOI at this time would be premature. These studies will identify the problems and seek solutions.

Until the studies are completed, an NOI would be counterproductive. The industry would have to attempt to respond to a Commission inquiry before there is adequate data for a meaningful response. As a result, the comments in response to such an NOI would likely be self-serving, polarizing the debate, delaying a resolution, and making it more difficult to move forward to a solution. BellSouth agrees with Nokia that the Commission should not “interrupt” the ongoing “cooperative cross-industry effort” that is underway to solve the interference and compatibility problems by beginning a proceeding. “Private industry is policing itself, under the Commission’s informal scrutiny, thereby encouraging rapid and concrete activity by all concerned.”¹³

Simply put, an NOI issued before the test results are in would be unlikely to elicit much information on which the Commission could base policy proposals. As Pacific Bell Mobile Services (“PBMS”) stated, “before any regulatory action is taken on this issue, it is important to have relevant data on hand regarding the extent of the problem and what the solutions would entail in terms of technical difficulty, time and cost. Realistically, the Commission cannot evaluate the four factors it must consider before revoking the current exemption without such information.”¹⁴

¹² USTA Comments at 3.

¹³ Nokia Comments at 2.

¹⁴ PBMS Comments at 2-3.

Moreover, the issuance of an NOI might be unnecessary. If the ongoing studies result in viable solutions to the potential interference issue, no rulemaking or inquiry would be necessary. In fact, Ericsson indicates that it already complies voluntarily with the wireline hearing-aid compatibility rules for its wireless products.¹⁵ By awaiting the results of the studies, the Commission might discover that the potential problems can be adequately addressed by the private sector, making regulatory proceedings unnecessary.

III. THE COMMISSION SHOULD BASE ITS POLICIES ON SCIENTIFIC EVIDENCE, NOT DISTORTED, MISUSED DATA AND UNSCIENTIFIC MARKETING PLOYS

As GSM MoU and the Cellular Telecommunications Industry Association ("CTIA") have shown in their extensive filings, the HEAR IT NOW petition manipulated selected data from a variety of studies in other nations to create a problem that does not really exist. With millions of GSM phones in some 77 countries throughout the world, "the catastrophic results that petitioner claims" simply have not occurred.¹⁶ GSM systems in Europe have resulted in "very few, if any, complaints" of hearing aid interference, and when it has occurred it has largely been limited to "older, poorly shielded units."¹⁷ In Denmark, where nearly 5% of the population use GSM phones, there has been "not one single complaint."¹⁸ This echoes the experience of many other countries.¹⁹

¹⁵ Ericsson Comments at 2.

¹⁶ Opposition of GSM MoU at 4.

¹⁷ *Id.* at 5.

¹⁸ Letter to Hon. Reed E. Hundt from Ole Mørk Lauridsen, Corporate Director R&D, Telecom Denmark, at 1 (March 26, 1995) ("Lauridsen letter"), *reproduced in* Opposition of GSM MoU at Attachment 1.

¹⁹ See Opposition of GSM MoU at 6 n.8 and Attachment 2.

In fact, both the studies on which HEAR IT NOW relied and later studies submitted by GSM MoU indicate that only very limited interference can be expected from deployment of PCS in the United States based on GSM technology. For example, GSM MoU indicates that a 1994 Danish study relied upon by HEAR IT NOW was updated in 1995 to show that "with the exception of older, inferior quality hearing aids, hearing aid users could use 2 watt GSM telephones without interference."²⁰ HEAR IT NOW did not reveal the updated conclusions. Similarly, a 1993 Australian study relied upon by HEAR IT NOW was updated and revised in 1995, but the revision, which found that proper shielding can solve most interference problems, was ignored by HEAR IT NOW.²¹

None of the studies on which HEAR IT NOW relied involved tests of GSM equipment operating under the same technical standards as those that will be met by United States GSM-based PCS equipment. Most significantly, the power level to be used in the United States will be significantly lower than in other countries' GSM systems, and other technical parameters will also differ significantly. The mobile communications industry, including PCS and cellular providers and equipment vendors, was nearly unanimous in criticizing the HEAR IT NOW petition. Ericsson strongly criticized HEAR IT NOW's use of distorted data from European studies to attack GSM. It noted that other mobile phone technologies, such as CDMA, also have the potential to interfere with hearing aids, as do virtually all digital devices, fluorescent lights, computer monitors, and "even AM radio broadcast stations".²² Ericsson stated:

First, as demonstrated by the comments filed with respect to HIN's petition, there is almost universal acknowledgment from the wireless

²⁰ *Id.* at 10, citing Lauridsen letter at 1.

²¹ See National Acoustic Laboratories Report No. 131, *Interference to Hearing Aids by the Digital Mobile Telephone System, Global System for Mobile Communications, (GSM)*, abstract iv (May 1995), reproduced in Opposition of GSM MoU at Attachment 4.

²² Ericsson Comments at 5-7; accord SBMS Comments at 6-7.

service industry, including major trade associations and major manufacturing interests, that the problem of interference to hearing aids is an issue of interference management which should be resolved through cooperative efforts. Second, no digital technology, including the CDMA technology which the spokesman of HIN has selected to market to the PCS industry, has been proven to be exempt from causing interference to hearing aids or other medical devices. In this respect, responsible representatives of the wireless services industry are in the process of voluntarily attempting to quantify the magnitude of interference to medical devices, to scientifically obtain data which will enable the industry to develop solutions to the problem which are acceptable to all affected parties. Third, the very studies submitted to the Commission as proof that GSM technology causes interference are flawed in the sense that they are based on facts which are not relevant to GSM-based PCS systems proposed to be deployed in the United States.²³

SBMS strongly criticized the HEAR IT NOW petition's reliance on European tests that involved GSM technical parameters differing substantially from those that will be employed in the United States. BellSouth agrees with SBMS that because GSM is not yet used in the United States, "the existence of a hearing aid interference problem due to GSM technology has not been nor can be determined in the United States. In that regard, there is apparently a question as to whether there even is a problem in some European countries where GSM is currently used."²⁴ SBMS supplied information showing that there have been only a handful of documented instances of hearing-aid interference from GSM phones in Denmark, Germany, England, Finland, and Norway.²⁵

Siemens Stromberg-Carlson criticized the HEAR IT NOW petition as "alarmist and anti-competitive since the Petition singles out PCS and specifically GSM. . . . [T]he basis of the HIN Petition could be based on a conflict of private interests."²⁶ Unsurprisingly, the only industry

²³ *Id.* at 9-10.

²⁴ SBMS Comments at 2-3.

²⁵ *Id.* at 3 n.4.

²⁶ Siemens Stromberg-Carlson Comments at 1-2.

support for the petition came from QUALCOMM, a CDMA manufacturer. It submitted Comments that praised CDMA technology but offered the Commission little of substance toward its development of policies. QUALCOMM included "test results" purporting to compare GSM and CDMA with respect to hearing-aid interference, but its tests are fundamentally flawed.²⁷

The HEAR IT NOW petition appears to be part of a media/regulatory campaign against GSM by CDMA interests.²⁸ For example, several commenters filed comments after reading a PC Magazine column by Bill Machrone heavily influenced by CDMA advocates.²⁹ The column urged its readers to write the FCC against GSM, which the article claimed posed a variety of dangers.³⁰ The letters that were filed as a result largely assumed the truth of the questionable allegations about GSM³¹ and contained emotional pleas for the Commission not to "adopt" the GSM standard.³² Some

²⁷ QUALCOMM Comments, Attachment A. For example, QUALCOMM tested its own CDMA digital phone against a simulated GSM TDMA signal achieved by "AM modulating an RF signal generator." *Id.* at 2. QUALCOMM provides few details of the characteristics of this simulated GSM signal and used higher power for the GSM phone than will be used in United States GSM-based PCS networks. Even with these flaws, however, the QUALCOMM test results showed that the range at which a 1900 MHz GSM phone will cause "audible interference" to in-ear hearing aids (0.5-2 meters) is comparable to the range at which a CDMA phone will cause audible interference to behind-the-ear units (0.7-1.3 meters). *Id.* at 4.

²⁸ HEAR IT NOW is affiliated with the "Wireless Communications Council," *see* HEAR IT NOW Comments at 1 n.1, and Ericsson notes that its spokesperson is Mr. James Valentine, who is the Chairman of both the Wireless Communications Council and North American Wireless. The latter company is an organization that will be providing CDMA equipment to prospective PCS providers. *See* Ericsson Comments at 2 n.3.

²⁹ Bill Machrone, *Portable Telephones for Everyone*, July 1995 PC Magazine at 83.

³⁰ Mr. Machrone stated, without indicating the true results of the tests, that GSM will cause a deafening buzzing noise for hearing aid users. He also alleged that GSM had interfered with hospital equipment in Sweden, an automobile airbag in Australia, and a Parisian taxi meter. *Id.*

³¹ *E.g.*, Letter from James W. Pendzick (filed July 26, 1995) ("This standard is used in Europe and is well-known to cause hearing-aid interference there. According to Mr. Machrone, the interference has a range of several feet and can easily become deafening.").

³² For example, one letter writer urged the Commission not "to allow technology like GSM into widespread use where it would drive the hearing aid wearers of the world nuts." Letter of Drew

of the letters also contained well-intentioned but impractical suggestions for aiding hearing-impaired persons.³³

The Commission should base its policies on studies based on science, not the agendas of organizations seeking the Commission's endorsement of their technologies and impairment of other competing technologies. The study underway at the University of Oklahoma is more likely to produce unbiased, scientific results than a CDMA equipment manufacturer's in-house demonstration of the alleged superiority of CDMA. As Siemens Stromberg-Carlson stated:

If the repeal of the exemption is enforced, all PCS technologies will be delayed since TDMA cellular, CDMA cellular, and their frequency upshifted versions for PCS, interfere with hearing aids with varying degrees. . . . The interference is complex and the solution is complex. SSC suggests that the Commission maintain the exemption as presently defined, and allow or direct that the industry (hearing aid manufacturers, wireless manufacturers, and other manufacturers of equipment that interfere) investigate and make recommendations to define and solve the problem. SSC is convinced that with the cooperative efforts of organizations, such as PCIA, . . . CTIA and the University of Oklahoma, a viable resolution of the problem can be made.³⁴

Morris, Ph.D. (filed July 26, 1995).

³³ One letter writer urged the Commission not only to ban GSM but also to require all portable phones to include technology that would depict the speaker's entire mouth area to allow hearing-impaired persons to read the lips of their correspondent. Letter from Mrs. Joan Kornbluh (July 12, 1995).

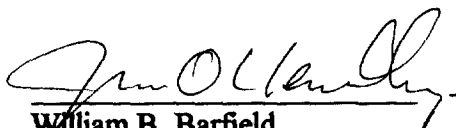
³⁴ Siemens Stromberg-Carlson Comments at 2.

CONCLUSION

For the foregoing reasons and those stated in BellSouth's Comments, the HEAR IT NOW petition should be denied.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Barbara J. Nicholson, hereby certify that copies of the foregoing "Reply Comments of BellSouth" have been served this 1st day of August, 1995, by first-class U.S. mail, postage prepaid, (* or by hand delivery) upon the following persons:

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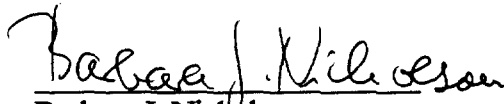
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